UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

JUL 25 1994

Mr. Orlando Monaco
Naval Facilities Engineering Command
Northern Division, Code 0223
10 Industrial Highway, Mail Stop #82
Lester, Pennsylvania 19113

Dear Mr. Monaco:

Please find below EPA comments on a Draft Feasibility Study Report for OU-3 submitted to EPA under letterhead dated July 1, 1994:

General

An executive summary should be included. Please submit to EPA for review and comment prior to including in final report.

1.0 Introduction

1.1 Purpose of Report

First sentence should read: "...to address contaminated groundwater in overburden and shallow bedrock attributable to "Area C"..."

Insert the following after the first two sentences: "This report also serves to meet the requirements of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA)."

Third paragraph, second sentence should read: "Area C includes Site 8, a former fire training area; Site 4, an inactive landfill; and the area bounded by Site 8, Site 4, the NAWC property line and the main runway (see Figure 1-1)." The third sentence should reference the author and date of the RI report and read "...aquifers at Area C and evaluates...".

Figure 1-1 should be replaced/revised to include the features identified in the description above. Figure 2-1 is also inadequate for this purpose.

1.2 Organization of Report

Second paragraph, first sentence should read: "..contamination at Area C and a risk assessment..."

2.0 Identification and Screening of Technologies

2.2 Background Information

First sentence should read: "...and appears to have moved off of NAWC property."

Second and third sentences should read: "The plume appears to be currently located within overburden and/or shallow bedrock underlying an area to the east of Site 8, a former fire training area, and to the south of an active maintenance area. Samples collected from monitoring and private wells in downgradient, off-base areas indicate that PCE contamination in shallow bedrock aquifers extends at least several hundred feet north of NAWC property."

Second paragraph - First sentence should read: "...collected off of NAWC property." Third sentence should read: "...indicates that unacceptable risks..."

Second paragraph should also include any conclusions regarding whether there are any inorganics attributable to Area C which pr sent an unacceptable risk and thus require remediation.

Third paragraph should reference RI report which supports the conclusion of concern.

Last sentence: What is meant by "pertinent"? "Pertinent" in terms of engineering design? Risk? For example, Risk Assessment in RI says barium presents an unacceptable risk yet the table does not include barium. Is this data truly representative of site conditions? (See comments on RI report.) Final table should be prepared after considering RI comments.

Table 2-1: Identify units. Define "Std". It is unclear what is meant by "Duplicates are as follows:". Identify fact that "Soluble" is determined by filtered samples, or consider simply saying "filtered".

A map should be provided to indicate the locations of the sample points identified in Table 2-1.

2.3 Remedial Action Objectives

The first sentence in this section should read: "...aquifers attributable to Area C, identified as OU-3..."

Second and final sentence in this section should read: "The general objective of the remedy is to eliminate unacceptable risk associated with exposure (or potential exposure) to groundwater contaminants in overburden and shallow bedrock aquifers attributable to Area C."

2.3.1.3 Action-Specific ARARs and TBCs

Table 2-8: Why is "December 1993" in the table?

2.3.2 Remedial Action Levels

This section should read: "The remedial action levels for each contaminant of concern shall be the MCL for that contaminant or the background concentration of that contaminant (the Pennsylvania ARAR under Pa. Code Sections 264.90-264.100), whichever is lower."

2.5.2.2 Institutional Controls

Implementability sub-section should read: "Land-use restrictions are currently in effect for NAWC property to prevent exposure to contaminated groundwater underlying NAWC property. However, after NAWC property is transferred to private parties, land use restrictions such as zoning or deed restrictions would necessary to assure there is no exposure. There are no existing restrictions on current private property. Similar restrictions would be needed in this case as well. The implementability of these restrictions is questionable."

Conclusion sub-section should read: "Since the implementability of institutional controls is questionable, these controls cannot be depended on at this time to prevent the exposure of concern."

2.5.3 Summary of Final Screening of Technologies and Process Options

Table 2-10, under "Institutional Controls", "Implementability" should read, "Restrictions may not be implementable."

3.0 Development and Screening of Remedial Alternatives

3.1.2 Alternative 2

The second sentence should read: "The extraction system would be designed to restore contaminated groundwater in overburden and shallow bedrock aquifers attributable to Area C to remedial action levels (see Section 2.3.2)." Delete the third sentence.

Technical Approach to Groundwater Extraction and Treatment

After the first paragraph, this section should reflect the conclusions reached in the RI regarding metals in groundwater attributable to Area C and Remedial Action Levels. The Pennsylvania ARAR regarding background concentrations should be considered. If additional sampling is needed to determine

whether the remedy needs to address a particular metal, this should be stated. Prior to including the text of this section in a final report, EPA requests the opportunity to review and comment on the proposed text.

Extraction Well System

The first sentence should read: "For remedial alternatives evaluation and cost estimation purposes, a conceptual design for a groundwater extraction system was prepared for Area C. "

Second sentence should read: "...rate of 6.5 gpm per well was estimated to be necessary to meet the objectives of the remedy."

Third sentence should read: "The wells were each assumed to be 6 inches in diameter and approximately 120 feet deep, the maximum observed depth of contamination to date."

Treatment System

The text in this section should identify two options under this alternative.

Under Option A, the location of the plant should be explicitly stated to be within Area C. A tentative location of the plant within Area C should be identified on a map. The text should state that there are two potential outfall locations for the plant - 1) the intermittent tributary of Little Neshaminy Creek immediately north of Kirk Road and 2) the outfall for the plant currently being constructed within Area A. Rather than indicate the potential outfall location in the first case to be limited to the location depicted on Figure 3-2, the report should state that the outfall could also potentially be located somewhere downstream of this point. The stream segment of concern should in turn be indicated on Figure 3-2, as well. It should be stat d that, in each case, the discharge would have to meet Pennsylvania NPDES requirements which consider both the flow and quality of the discharge.

Under Option B, the extracted groundwater would be pumped to the plant being constructed within Area A for treatment and subsequently discharged to the outfall of the Area A plant. The report should state that, for cost estimation purposes, it is assumed that the extracted groundwater from Area C would be treated by the treatment train being constructed under OU-1. However, it should also be stated that the more limited treatment train included under Option A can also be installed at the Area A plant to treat extracted groundwater from Area C.

Next to last paragraph in section, next to last sentence should read: "Carbon adsorption was selected to remove PCE."

Last paragraph in section: Since th rem dy is not interim in nature, please del te.

Alternative 3

This is now Option B of Alternative 2. As a result, there should be no Alternative 3.

4.0 Detailed Analysis of Alternatives

4.2 Alternative 2

The description of the remedy should be consistent with comments on Sec.3.1.2 above.

Delete second paragraph.

Third paragraph should read: "This alternative would incorporate the sampling of 1) observation wells..., 2) monitoring wells which are appropriate for observing extraction well performance and 3) extraction wells. For cost estimation purposes, it was assumed that sampling...It was also assumed that groundwater samples would...etc."

4.2.2 Overall Protection of Human Health and the Environment

This section should read: "This alternative would protect human health and the environment by reducing by groundwater contaminants to levels which do not present an unacceptable risk."

4.2.3 Compliance with ARARs

This section should read: "Under Option A, it is unknown whether discharge of treated groundwater to the unnamed tributary of Little Neshaminy Creek north of Kirk Road could meet NPDES requirements regarding flow rate and/or effluent quality. Otherwise, both Option A and Option B are expected to meet all ARARs."

4.2.4 Long-Term Effectiveness and Permanence

This section should read:

"Both Options A and B should be equally effective over the long-term.

To ensure this effectiveness for all contaminated groundwater attributable to NAWC, both options provide for conserving the

capacity of treatment plant designed under OU-1 for treating the more highly contaminated groundwater associated with Area A."

4.2.5 Reduction of Toxicity, Mobility and Volume Through Treatment

Should read: "Both Options A and B are equally effective in reducing the toxicity, mobility and volume of groundwater contaminants associated with Area C through treatment."

4.2.7 Implementability

Delete the second paragraph and replace with the following:

"Option A includes the discharge of the treated groundwater to an intermittent, unnamed tributary of Little Neshaminy Creek located immediately north of Kirk Road (see Figure X). This discharge would have to meet NPDES requirements which consider the flow rate and effluent quality of the discharge. It is unknown whether the discharge could meet these requirements, which have not been established at this time.

Option B includes the discharge to the treated groundwater to the existing outfall of the NAWC waste water treatment plant (WWTP). Adequate capacity is available per an existing NPDES permit for the NAWC WWTP to accommodate this treated groundwater."

4.2.8 Cost

The development of a cost range for Option B should be considered. In particular, the development of a cost estimate for treatment of Area C groundwater within the OU-1 plant but with the "Option A treatment train" should be considered.

Table 4-1

Under Alternative 1, please adjust given final nature of the remedy.

Per comments above, rather than include Alternatives 2 and 3 in this table, include Alternative 2, Option A, and Alternative 2, Option B. In addition, adjust as needed given final nature of remedy.

Under **Compliance with ARARs** for Option A, indicate that compliance with NPDES requirements is unknown at this time.

Under **Long-Term Effectiveness**, note that both Options A and B under Alternative 2 provide for conserving the capacity of the OU-1 plant to treat contaminated water from Area A.

Under **Implementability**, note it is unknown for Option A due to unknown NPDES requirements.

5.0 Comparative Analysis of Alternatives

Revise section as needed emphasizing comments on Sec. 4.0.

Should you have any questions or coments regarding the above, please call me at 215-597-0549.

Sincerely,

Darius Ostrauskas
Remedial Project Manager

cc: Don Olmstead, NUS
Tom Ames, NAWC
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